**K-5 Math Lesson Plan**

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| **Teacher: Sams** | | | **Grade: 5th** | | | **Date(s)**: 3 days |
| **Unit Title:** Unit 1-Understanding the Decimal Place Value System | | | | **Corresponding Unit Task:** Taught Prior to performance task 2. | | |
| **Essential Question(s):** How does a digit’s position affect its value? How many different ways can a number be written? | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**  -prepared numbers for each group to call out at teacher lead station and to have students compare to at the teacher lead station.  -“I Have, who has” deck  -anchor chart paper (x2)  -website book marked-[Comparing Decimals Fruit Shoot](http://www.sheppardsoftware.com/mathgames/decimals/CompareDecimals.htm)  -homogenous groups  -timer (or use online timer) -base 10 blocks or Place Value Money  -magazines, newspapers, ads | | **Student:**  -white board and marker (1 per pair)  -notebook paper for closing responses  -scissors  -glue stick  -1 sheet of 11 x 14 construction paper  -base 10 blocks as needed  -magazines, newspapers, ads  -pencil | | | Tenths  hundredths  thousandths  expanded form  base-ten numeral  place value  number name  greater than (>)  less than (<)  equal to (=)  compare/comparison  decimal/decimal point | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**   |  | | --- | | 5.NBT.1  *Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.* |  |  | | --- | | 5.NBT.3a  *Read and write decimal numbers to thousandths using base-ten, number name, expanded form.* | | | | | | |
| **I Can Statement(s):**  -I can recognize a digit in one place represents 10 times as much as the place to its right.  -I can recognize A digit in one place represents 1/10 of the place to the left.  -I can read decimals to the thousandths using number names.  -I can read decimals to the thousandths using expanded form.  -I can write decimals to the thousandths using number names.  -I can write decimals to the thousandths using expanded form.  -I can use base-ten numerals to form decimals to the thousandths.  -I can use base-ten numerals to form decimals to the thousandths | | | | | |
| **Activating Strategy/Hook:** (How will students become cognitively engaged and focused?)  -Play the “I have, who has game.”  -Pass one card out to every student. Each card has “I have (decimal number)” on the front and then “Who has (decimal or whole number more or less than) my number.  -So a student’s card might say “I have 3.542” on the front and then on the back it would say “Who has 3 tenths more than me?”  -After the first student read their card the student with “I have 3.842” on the front would read their card.  -have the students go through this process until 10 minutes are up or everyone is finished, whichever comes first.  \*\*\*Be sure to pick times to stop and ask certain students to explain how they knew that their number is more or less the amount of the previous student’s number. **Always** have them come up and show on the overhead or document camera their thinking. This allows students to see different ways of thinking and modeling numbers.\*\*\*  -do this each of the three days that you are doing the math stations. | | | | | |
| **Teacher Directed:**  -Explain to the students that over the next three days they will rotate through three decimal math stations. Two of them will be independent stations and one will be teacher lead. They will spend 35-40 minutes at each station each day. They will only do 1 station per day. Then explain the three stations.  -groups and pairs within groups should be homogeneous to allow for more differentiated instruction. | | | | | |
| **Guided Practice:**  **-Station 1 (teacher lead)-**In this station the teacher will be the “Narrator” and the students will be in pairs. Each pair of students will have the following: 1 small dry erase board, 1 dry erase marker, and 1 set of manipulatives to model numbers (either base ten blocks or PV money (see attached template if you would like to use the money)).  -One student will start with the board and marker the other students will start with the manipulative.  -The teacher will read a number out loud🡪four and five hundred thirty one thousandths🡪4. 531.  -The students with the board will then write that number on their board and show it to the teacher to check accuracy.  -then the student with the board will allow their partner to see the number so that their partner can then model that number using the manipulative.  -Once the student with the manipulative has finished modeling the number, the student with the board should check over the model to see if it is correct.  -While this is happening the teacher is watching over each pair, asking probing questions and guiding learning.  -When all the groups have finished BEFORE the students erase their board and put away their model, the teacher will show each group another number that is <, > or = the number the students just wrote and modeled.  -each pair must then decide whether their number is <, >, or = the number on the teacher’s board.  -After 30 seconds have a brief discussion of what the students decided and why they made their particular choice. **If students do not mention the concept of** “each place value column when moving right to left is 10 times more than the one before it and is 1/10 the one before it when moving left to right” **be sure to review this concept**. (Note this would have been taught in a previous whole class lesson prior to the stations)  -Then have the each pair flip-flop responsibilities and repeat the above process. | | | | | |
| **Independent Practice:**  **Station 2 (independent**)-In this station the students will be reviewing the concept of the different kinds of numbers and their representations.  -Give each pair of students a set of newspapers, sale ads, and magazines. The students are responsible for going through each of these resources and locating the different kinds of numbers and/or representations (i.e. whole numbers, whole numbers with decimals to the tenths, whole numbers with decimals to the hundredths, whole numbers with decimals to the thousandths, expanded form, word form, number form, or a model)  -student expectations for amount, complexity and variety should be different depending on ability. (see differentiation below)  -When students find an example they should cut it out and, with a glue stick, glue it to the provided sheet of 11 x 14 construction paper.  -Then students should label the number type and representation type. For example if a student found the price of a new video game was $49.99. They would label is as whole number with decimals to the hundredths, number form.  -Beside each entry students should then show two other representations of that number (one should always be a model). For $49.99 a pair of students might show the following🡪 $40.00 + $9.00 + $.90 + .09 and then a picture model of that number (four cubes, 9 flats (flat = 1), 9 rods, and 9 units)  -The students’ task is to find as many examples as they can during the allotted time.  -Each pair’s construction paper will be posted daily at the end of the time in a designated area. This will allow for viewing and discussion later.  **Station 3 (independent):** [Comparing Decimals Fruit Shoot](http://www.sheppardsoftware.com/mathgames/decimals/CompareDecimals.htm)  -In partners students will go to the above website and play the fruit shoot game. To play the game the students must first choose a level (see differentiation notes below). After choosing a level, the screen then begins to fill with three kinds of fruit. One fruit has “>” on it. Another fruit has “<” on it. The last fruit has “=” on it. The crosshair (the mouse) has an inequality on it. The students must shoot the correct fruit (symbol) that makes the inequality true.  -Students can take turns clicking. | | | | | |
| **Closing/Summarizing Strategy:**  -At the end of each station (day) have the students go back to their seats and write down 2 things: 1. Something new they learned today or feel like they mastered, 2. Something they still need help with.  -Take these up daily and review. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| Station 1-Modify the difficulty of the decimals numbers given🡪go beyond thousandths  Station 2-Students should find at least one example of every model and representation  Station 3-Choose level 3 and/or timed mode | | | Station 1- Modify the difficulty of the decimals numbers given🡪go to tenths, then if mastered move to hundredths and so on.  -model several whole group before releasing to pairs.  Station 2- Ask student pairs to focus on finding example of decimals to hundredths first, then tenths, then thousandths. Encourage them to find several examples of each before moving on.  Station 3-Choose level 1 and relaxed mode | | | Station 1- Modify the difficulty of the decimals numbers given🡪 go to tenths, then if mastered move to hundredths and so on.  -model several whole group before releasing to pairs.  -The first one modeled together as a group, record on an anchor chart so that it can be used as a visual throughout the station  Station 2- Ask student pairs to focus on finding example of decimals to hundredths first, then tenths, then thousandths. Encourage them to find several examples of each before moving on.  -Provide an anchor chart visual of what a sample cut out and response would look like.  Station 3-Choose level 1 and relaxed mode |
| **Assessment(s):**  Informal Assessment-student conversation in teacher lead station, student performance modeling/writing decimals in teacher led station, daily student responses  Formal- student product from station 2 | | | | | | |
| **Teacher Reflection:** (Next steps?)  -Can the students model decimal numbers? Write decimal numbers? Compare decimal numbers?  -Students misconceptions/understandings  -What do I need to watch for/possibly reteach in the following lessons? | | | | | | |